

1. Term 1

1. Determining direction
2. The use of lines of longitude and latitude
3. Trade and transport routes
4. Map projections

2. Term 2

1. Population distribution
2. Rapid expansion problems

3. Term 3

1. Weather predictions and synoptic weather charts
2. Climate and vegetation regions of the world
3. The main biomes

4. Term 4

1. Rich and poor
2. Reasons for wealth/poverty
3. Characteristics of developing countries
4. HIV/Aids as a developmental problem

Determining direction

SOCIAL SCIENCES: Geography

Grade 6

MAP WORK AND PRACTICAL WORK

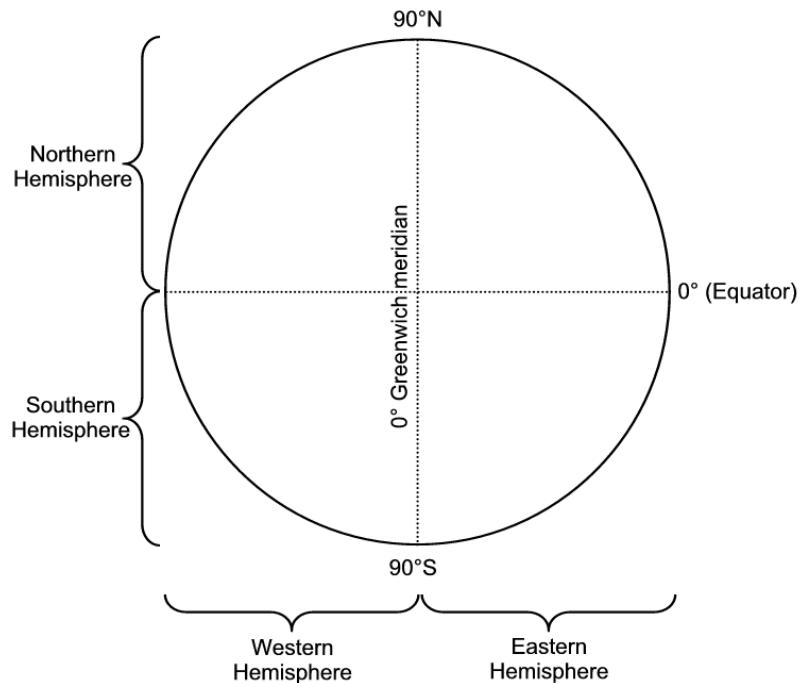
Module 1

DETERMINING DIRECTION

1. Using lines of longitude and latitude to indicate location

In the same way as we draw lines on a map or plan, imaginary lines are drawn on the earth. Exactly halfway between the north and south poles, we find the EQUATOR. The equator is called the 0° line of latitude, and runs from east to west. Parallel to the 0° line of latitude, we also find a 90°N and a 90°S line of latitude at the two poles.

The equator divides the globe into two halves. The upper half is called the NORTHERN HEMISPHERE and the lower one the SOUTHERN HEMISPHERE.



There are also imaginary lines running from north to south. They are called the lines of longitude. The line of longitude lying on 0° is called the GREENWICH line of longitude. It, in turn, divides

the earth into a WESTERN HEMISPHERE and an EASTERN HEMISPHERE. East of the Greenwich line of longitude run 180 lines of longitude, and to the west of it there are also 180 lines of longitude.

All these lines of longitude and latitude form intersections on the earth, with which the exact location of a place can be indicated. More about this later. For now it is enough if you are able to indicate in which hemisphere(s) a place, land or continent is.

Activity 1:

To answer questions

[LO 1.3, 1.5]

Study a map of the world in your atlas and answer the following questions:

- Name the continents through which the

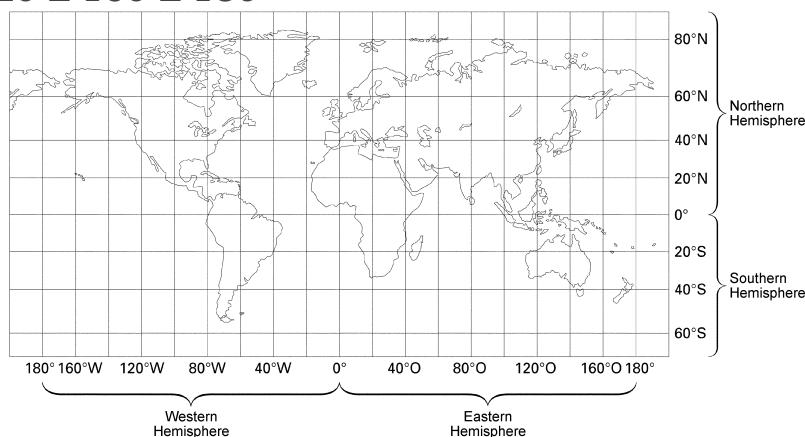
equator runs.

- The equator runs through three oceans. Name them.
- Is Cape Town situated in the Eastern or Western Hemisphere?
- Which continents lie completely north of the equator?
- Which continent lies completely in the Western Hemisphere?
- In which two hemispheres is South Africa located?

2. Location by means of degrees of longitude and latitude

Lines of longitude and latitude

**180 ° 160 °W 120°W 80°W 40°W 0° 40°E 80°E
120°E 160°E 180°**



3. Lines of latitude

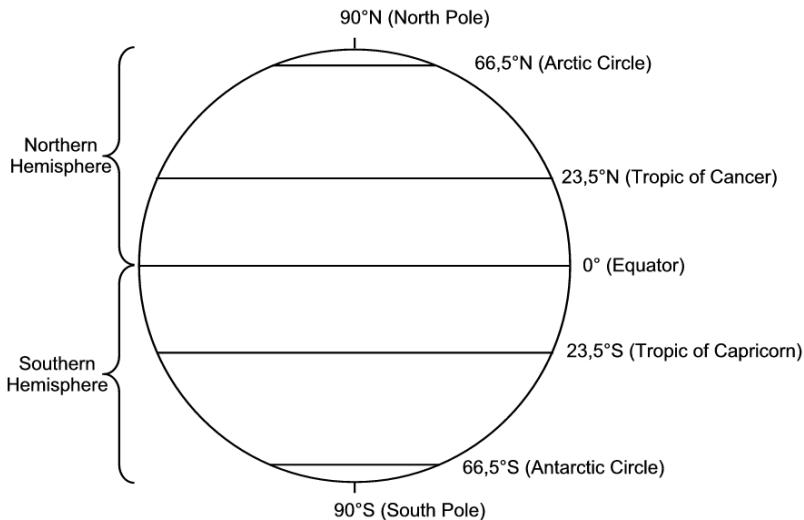
A few important facts:

The best-known one is the equator (0° line of latitude).

- The tropics are at $23\frac{1}{2}^\circ$.
- The pole circles are at $66\frac{1}{2}^\circ$.
- The poles are at 90° (actually a point and not a line).
- All lines of latitude run parallel to one another.
- Lines of latitude indicate the northern and southern hemispheres.
- When the location of a place is indicated, latitude is mentioned *first*.

The latitude of a place is a good indication of its climate. You know that places near the equator (0°) are normally very hot. You also know that places near the poles (90°) are very cold. Remember that there are more factors than only latitude that influence climate.

The most important lines of latitude

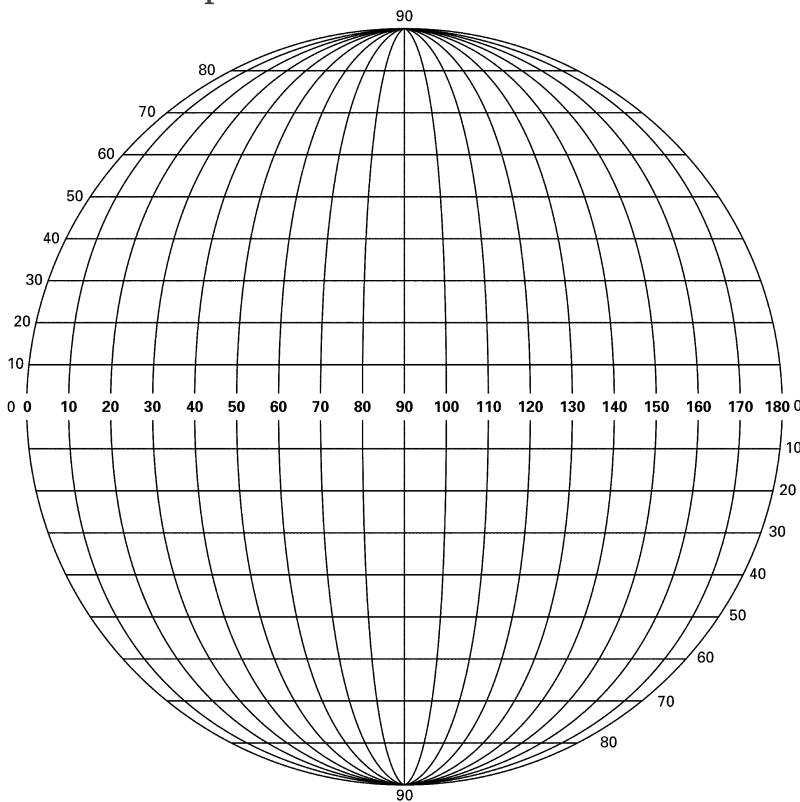


4. Lines of longitude

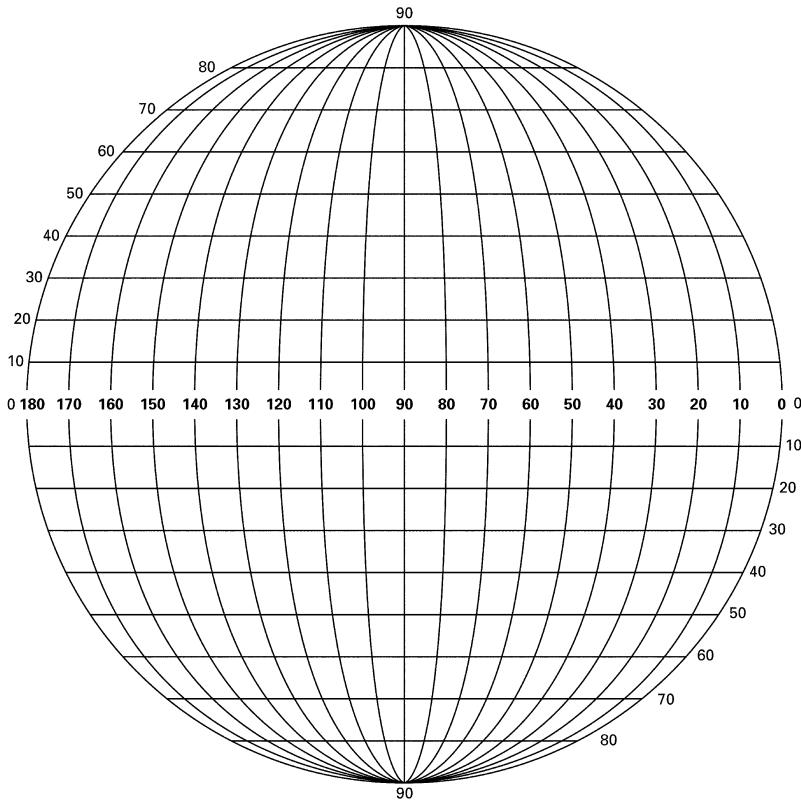
A few important facts:

- The best known is the Greenwich meridian (0° line of longitude).
- From Greenwich (0°) the lines of longitude are numbered to the east up to 180° .
- This forms the Eastern Hemisphere.
- From Greenwich (0°) the lines of longitude are also numbered to the west up to 180° .
- This forms the Western Hemisphere.
- Lines of longitude meet at the poles and are all the same length.
- At the equator the lines of longitude are furthest from each other.
- When the location of a place is indicated, the longitude is always mentioned second.

Eastern Hemisphere



Western Hemisphere



Use a globe or a map in your atlas and make sure you understand what each of these facts means.

- The Greenwich meridian (0° line of longitude) forms a half-circle on a globe. If it is continued around the back of the globe, it forms another half-circle. The half-circle at the back is called the antipode of the 0° line of longitude and its number is 180° . A line of longitude and its antipode always form a full circle. Therefore, from the 0° line of longitude, one can move 180° to the west and 180° to the east.

In this way, each line of longitude has an antipode and if the numbers of the two lines' grades are added together, the answer is always 180° .

But now we have a problem: If we move eastward from the 0° line of longitude and westward from the 0° line of longitude, we reach the 180° line of longitude from both sides. Now our times are going to differ a lot!

- To solve this problem, the **International Date Line** (IDL) was developed.

It follows the 180° line of longitude, but never cuts across land.

The date east of the IDL is one day earlier; west of the IDL is one day later.

From east to west, you lose a day if you move across the IDL. From west to east, you win a day if you cross the IDL.

- A place's longitude is also an indication of **time**.

The earth revolves from west to east around its own imaginary axis. So the sun rises earlier in places that are nearer to the east.

The sun rises in Durban ($31^\circ E$) approximately 50 minutes earlier than in Cape Town ($18\frac{1}{2}^\circ E$). In

South Africa such a difference isn't a problem, because we use only one time zone (30° E). In a country like the USA, however, it becomes a problem. The sun rises in New York (74° W) approximately three hours earlier than in San Francisco ($122\frac{1}{2}^{\circ}$ W). So in the USA you need to have different time zones.

- You may have noticed that when rugby matches are played in Australia or New Zealand and we watch them on TV, it's very early in the morning over here. This is the case because those countries lie very far east of South Africa and so the sun rises "earlier" over there.
- Calculating the time difference isn't so difficult. It all has to do with the way in which the earth revolves around its own axis.
- How long does it take for the earth to revolve around its own axis? It takes 24 hours.
- Through how many degrees does the earth revolve in these 24 hours? **The earth revolves through 360° .**
- If we now divide the 360° by 24 hours, we find that the earth revolves through an angle of 15° every hour. If two places are 15 degrees of longitude from one another, the sun will rise precisely one hour earlier at the one lying further east.

Assessment

Learning Outcomes(LOs)

LO 1

GEOGRAPHICAL ENQUIRY The learner will be able to use enquiry skills to investigate geographical and environmental concepts and processes.

Assessment standards(AS's)

We know this when the learner:

- selects and records relevant information from sources for specific purposes (including recording and observing in the field);
- locates relevant places on maps using latitude and longitude (degrees and minutes);
- uses information to propose solutions to problems;

1.5 reports on enquiries, through discussion, debate, structured writing, graphs, tables, maps and diagrams.

The use of lines of longitude and latitude

SOCIAL SCIENCES: Geography

Grade 6

MAP WORK AND PRACTICAL WORK

Module 2

THE USE OF LINES OF LONGITUDE AND LATITUDE

1. How are lines of longitude and latitude used in your atlas?

Lines of latitude (N or S) and longitude (E or W) can also be used TOGETHER to describe the location of places exactly. Then they are called that place's location co-ordinates.

Let's say you have no idea where Sydney is on the globe. Rather than reading and searching a map for hours, you can go to the INDEX at the back of the atlas, where the names of places are arranged alphabetically.

Example:

Next to Sydney the following particulars are given:

Sydney 55 33.55 S 150.30 E

This means

55 - page 55 in the atlas (differs from atlas to atlas)

33.55 S - 33 degrees and 55 minutes south

150.30 E - 150 degrees and 30 minutes east

By using the degree reference, any place can be easily found. The degree reference refers to degrees of longitude and latitude.

Activity 1:

To determine the location of capital cities

[LO 1.3]

Find the following capitals in the index of your atlas, and write down the location of each one completely. Then indicate which one should have the coldest climate, which ones should have roughly the same climate, etc.

Capitals	Location	Climate

Stockholm	59.20 N 18.10 E	
Berlin		
Rome		
Tripoli		
Kinshasa		
Windhoek		
Cape Town		

[LO 1.2]

Name the three kinds of scales indicated on the map of the world:

Measure the distance between the following places in centimetres. Use the map's ratio scale and determine the real distance in kilometres. Show your calculations.

- a) (4) Cape Town to (5) Melbourne _____ km
- b) (6) New York to (7) London _____ km
- c) (8) Paris to (9) Johannesburg _____ km

Study the world map and say in which direction the following countries lie from one another:

South America to Europe

Europe to Africa

Australia to South Africa

Europe to Australia

If you want to fly from (9) Johannesburg to the nearest ocean, in which direction and how far will this be in kilometres?

Direction

Distance _____ km

In which two hemispheres are the following countries and continents situated?

h) Asia _____ and _____

i) Canada _____ and _____

j) South Africa _____ and _____

k) India _____ and _____

l) USA _____ and _____

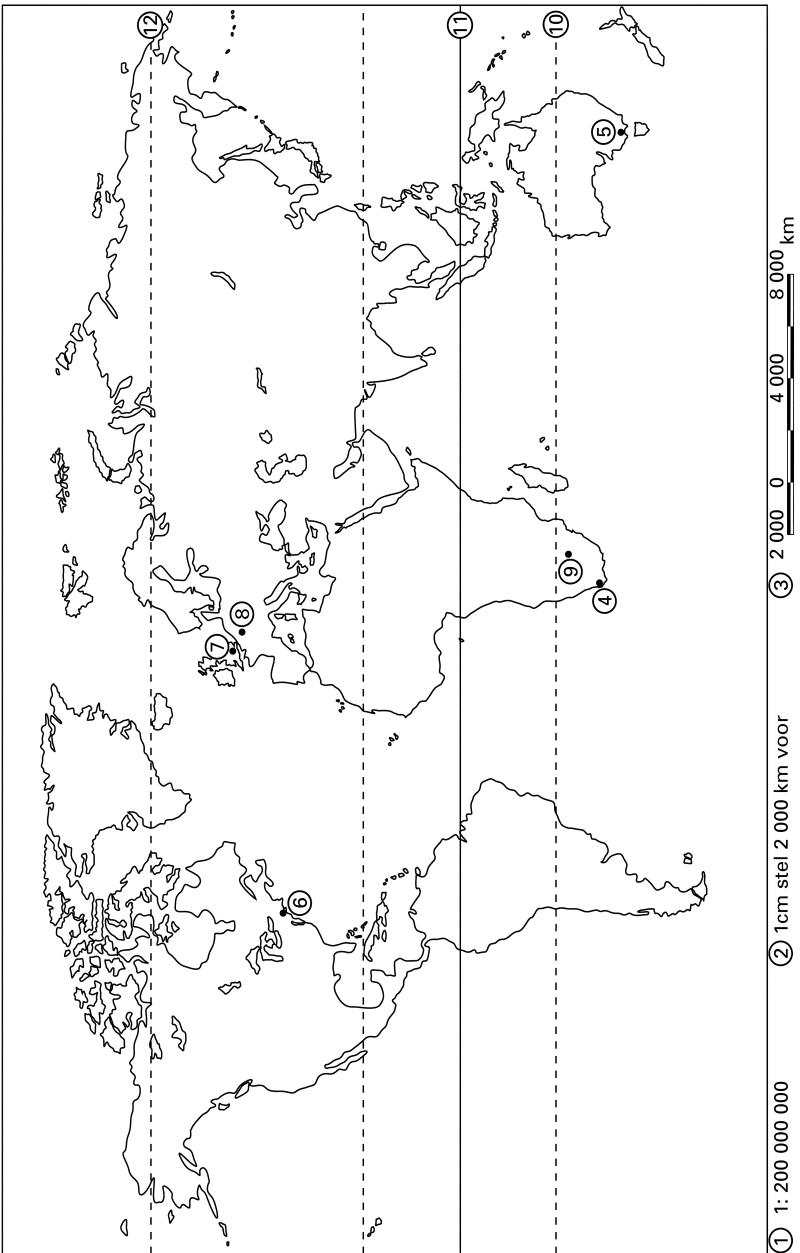
Which lines of latitude are represented by numbers (10), (11) and (12)?

Name the line of longitude that runs through London.

In the morning, will the sun “appear” at Australia or South Africa first? Give reasons for your answer.

Figure 4

***SORRY, THIS MEDIA TYPE IS NOT
SUPPORTED.***



***SORRY, THIS MEDIA TYPE IS NOT
SUPPORTED.***



Activity 3:

To use an atlas index

[LO 1.3]

Find the place names in the following questions in your atlas index and answer each of the questions:

1. Which river flows through Munich?
2. Which channel connects Berlin with the North Sea?
3. Name the largest island in Japan
4. How high is the highest point of the Caucasus?
5. Name the capital of Taiwan

6. Between which two parts of the United Kingdom are the Cheviot Hills?

_____ and _____

7. What is the time difference between Rosario and Manaus in South Africa?

8. Which city lies 25 km southeast of Amsterdam?

9. In which country can we find the city of Stuttgart?

10. Which river runs into Lake St Lucia?

11. How far is the Argentine capital from the capital of Uruguay?

12. What is so unique about Lake Titicaca? (Look at the colour of the surrounding area.)

13. Which of Ladismith or Ladysmith is closest to Cape Town?

14. On which island can you find the city of Palermo?

15. Roughly how many kilometres is the coastline of the Nigerian delta?

Assessment

Learning Outcomes(LOs)

LO 1

GEOGRAPHICAL ENQUIRY The learner will be able to use enquiry skills to investigate geographical and environmental concepts and processes.

Assessment standards(AS's)

We know this when the learner:

selects and records relevant information from sources for specific purposes (including recording and observing in the field); locates relevant places on maps using latitude and longitude (degrees and minutes); uses information to propose solutions to problems; 1.5 reports on enquiries, through discussion, debate, structured writing, graphs, tables, maps and diagrams.

Memorandum

Activity 1:

Capitals	Location	Climate
Stockholm	59.20 N 18.10 E	Cold
Berlin	52.30 N 13.24 E	Cold
Rome	41.55 N 12.30 E	Moderately cold
Tripoli	32.30 N 13.15 E	Moderate
Kinshasa	22.36 S 17.04 E	Warm

Windhoek	22.36 S	17.04 E	Warm
Cape Town	33.58 S	18.30 E	Moderate

Activity 2:

Ratio scale

Word scale

Line scale

$\pm 10\ 000$ km

$\pm 6\ 000$ km

$\pm 7\ 000$ km

NE

S

W

g) SE

E

± 600 km

N and E

N and W

S and E

N and E

N and W

23,5°C

0°

60°N

Greenwich (0°)

Australia – E of SA

Activity 3:

Isar

Mitteland Canal

Honshu

Elbrus/ 5633 m

Taipei

Scotland and England

None

Hilversum

Germany

Umfolozi

250 - 300 km

Very high

Ladismith

Sicily

15. \pm 250 km

Trade and transport routes

SOCIAL SCIENCES: Geography

Grade 6

MAP WORK AND PRACTICAL WORK

Module 3

TRADE AND TRANSPORT ROUTES

- In the same way that trade was the driving force behind the journeys of discovery that were undertaken by Diaz and Da Gama, it is

still the main reason why people travel from one place to the other. One group disposes of products/services that the other group needs to acquire. Regular communication between the groups facilitates the execution of the trade transactions.

- Transport takes place by road, sea or air. The central trading centres are located in large cities, and for that reason the main transport routes are between these cities.

Activity 1:

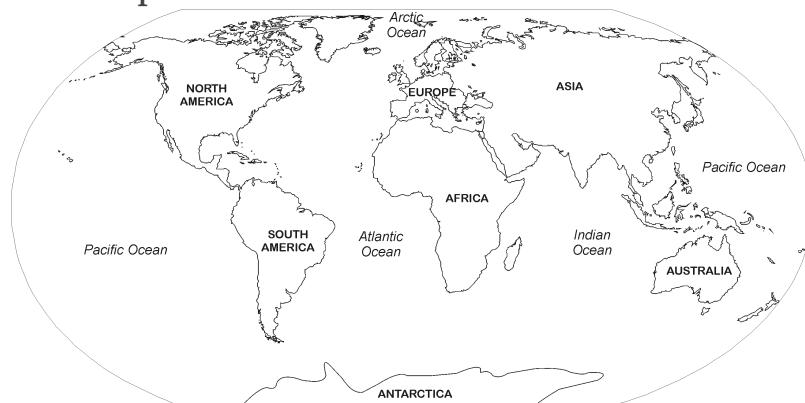
To indicate the most important air-routes

[LO 1.5]

Visit a travel agency in your town and ask for a map of the world that indicates the most important air-routes. Redraw the main air-routes according to the map of the travel agency in red on your own map.

Find a map of the major sea-routes in your atlas and draw those routes in orange on your map. Finally, make a list of the most important cities that are points of departure and points of arrival on these routes.

World map



Activity 2:

To indicate information on a map of South Africa

[LO 1.5]

Draw a map of South Africa and fill in the following (use the correct map symbols):

- four important seaports
- railway line from Cape Town to Johannesburg
- four important airports
- the most important domestic air-routes

Activity 3:

To make a decision on the transportation of goods

[LO 1.4]

You are in charge of an export company in Durban. You have to dispatch the following merchandise to their destinations. You and your export team must decide on the best means of transport for the merchandise:

- 100 dozen roses from Bloemfontein to Sydney,

Australia;

- 10 tons of scrap-metal from Johannesburg to New York.

Assessment

Learning Outcomes(LOs)

LO 1

GEOGRAPHICAL ENQUIRYThe learner will be able to use enquiry skills to investigate geographical and environmental concepts and processes.

Assessment standards(AS's)

We know this when the learner:

- selects and records relevant information from sources for specific purposes (including recording and observing in the field);
- locates relevant places on maps using latitude and longitude (degrees and minutes);
- uses information to propose solutions to problems;

1.5 reports on enquiries, through discussion, debate, structured writing, graphs, tables, maps and

diagrams.

Map projections

SOCIAL SCIENCES: Geography

Grade 6

MAP WORK AND PRACTICAL WORK

Module 4

MAP PROJECTIONS

Map projections

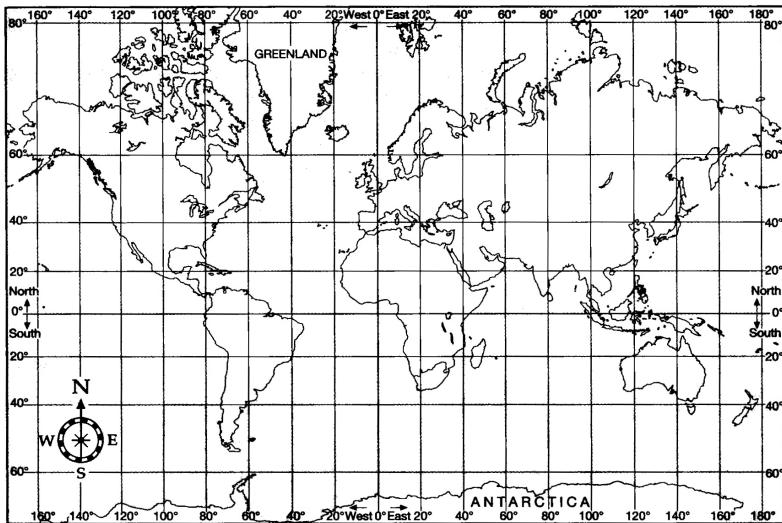
- The only way in which a map of the world can

be drawn accurately, is to do it on a round ball such as a globe. However, it is cumbersome to carry these globes of different sizes and shapes around. For this reason different geographers applied different methods to develop flat maps that convey accurate information. Some of these projections are named after the person who developed them, and others were named after the method that was used to develop the projection.

1. The Mercator projection

- The geographer, Gerhardus Mercator, used the cylindrical method to design his projection. This projection can be compared to a sheet of transparent paper folded in the form of a cylinder, the same size as a globe, and then placed over the globe. After the projection has been traced onto the paper, the paper is flattened, which then forms the Mercator projection.

Mercator projection



2. Features of the Mercator projection

- The lines of latitude are straight lines.
- The lines of longitude are parallel to one another.

The continents have the right shape, but they are enlarged, especially at the Polar

Population distribution

SOCIAL SCIENCES: Geography

Grade 6

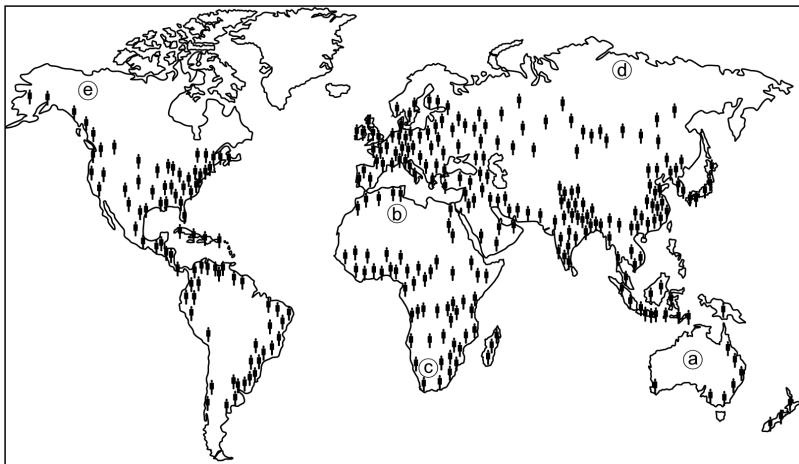
POPULATION DISTRIBUTION AND DENSITY

Module 5

population distribution

- It is easy to analyse the words *population distribution*. *Population* refers to people and *distribution* refers to where these people live on earth. The map below indicates that people are not distributed evenly across the globe. In

certain areas there is a larger concentration of people than elsewhere.



1. Factors that influence the movement and settlement of people

There are approximately 6 milliard (6 000 million) people on earth and they inhabit only approximately 15% of the surface of the earth (see circle graph).

There are certain factors that influence the choice of where to live.



Natural factors:

Climate:

Pleasant temperatures (between 10 °C and 30 °C) and comfortable humidity attract people. Extreme circumstances such as windstorms or very high rainfall should not prevail.

Sources:

People go where their basic needs can be addressed. Food and water are the most important of these needs.

Human factors

Economy:

People will settle where they can earn money (often in spite of an unpleasant climate).

Political decisions:

Decisions made by the government of a country can make circumstances very unpleasant for the inhabitants, which cause a migration of people elsewhere.

AN INTERESTING FACT: - Approximately 90% of the world population lives in the Northern Hemisphere.

- Approximately 60% of the world population lives in areas that are lower than 200 m above sea level.

Activity 1:

To study a map of the world as a group to acquire information

[LO 1.1]

- Study the map of the world as well as maps in your atlas. Find possible answers to the following questions:
- What are the reasons for the low density of

population at a, b and c?

- Why is the population at d and e also sparse?
- Does the Amazon River in Brazil have anything to do with the density of _____ population in that country? (Explain)
- Explain the reasons for the density of population in the North Eastern corner of _____ Africa.
- Would you say that Australia is an urbanised country?

2. The choice: in the city or in the country/rural area?

- Most of the grade 6 learners who are reading this, live in a city or in a large town! We know this because more than half of our country's population is **URBANISED**. This means that more than 50% of our people live in large towns or cities. This is determined by means of a **census**.
- When you examine the map on page 3 it becomes clear that people are not distributed evenly over the globe, but are concentrated in certain parts. This has not always been the case. From the very beginning – even in Biblical times – there were cities, although most people did not live there. Only over the past 50 years the number of people in South Africa living in cities increased, and decreased in rural areas. These figures vary from country

to country.

- In the migration between urban and rural areas, technology has always played a significant role. As new opportunities for work develop, people change their workplace and often the place where they live. This means that people generally move from rural to urban areas to look for new employment opportunities.
- Technological development results in people being replaced by machines in the workplace and that the people who lose their jobs, move to the cities where there are more employment opportunities.

What happened in Britain and the rest of Europe about 200 to 250 years ago?

Factors that played a role in the movement of people from rural areas to towns and cities:

- Because of agricultural technology fewer people were needed to work in fields to produce food.
- Because of developments in medical technology, there was a greater increase in population growth and people moved to the cities where they expected more job opportunities.
- Steam technology resulted in the building of factories (close to coal mines) and many of the

home industries in the rural areas became redundant.

- The cities offered a better working environment and better pay.

Activity 2:

To have a class discussion on urbanization in SA

[LO 1.1, 1.5, 2.1, 2.2, 2.3]

- Talk to your parents about the situation in South Africa and have a class discussion afterwards about the patterns of urbanization in South Africa. Your teacher will guide you.
- Particularly look for similarities and differences between Europe in the past, and present day South Africa. Write a short paragraph on the subject.

Interesting statistics relating to how rapidly urbanisation took place in Europe in the past:

Britain

- 1800 - 25% of the population lived in the cities and towns
- 1900 - 75% of the population lived in the cities

and towns

The city of Milan in Italy

- Between 1951 and 1956 the population of the city increased by 1,5 million! Seventy percent of the new inhabitants came from rural areas in Southern Italy.
- During the last 50 years there had been such a fixed pattern in population movement from rural to urban areas, especially in cities with rapidly developing industries, that rural areas were regarded as a source of labour for the industry. The depopulation of the countryside in areas such as northern Norway, the west of Ireland and northern Scotland was so severe, that it was difficult to refer to those areas as viable communities. The problem was made worse by the fact that the majority of people who moved were young and this slowed down the population growth even further.
- Some countries have taken steps to rectify this situation. In Italy, for example, factories have been established in the south of the country.

3. Europe: change in the settlement of people over the past 50 years

Activity 3:

To identify urban areas in Western Europe

[LO 1.5]

This map shows the urban areas (indicated in black) in Western Europe to which people moved over the past 50 years. Do you realise where growth at a rate of 2% per year over a period of 50 years could lead? Identify the urban areas by placing the numbers alongside the cities.



Madrid

Barcelona	
Milan	
Stockholm	
London	
Rotterdam	
Paris	
Copenhagen	
Marscilles	
Lisbon	

- Activity 1.4 refers to **urban areas** instead of **cities**. In many instances this is due to expansion of cities. Eventually they merged with one another. The Ruhr region in Germany is one area in which a number of cities have merged. Those of you who are familiar with areas such as the Nelson Mandela Metropole, the area between Cape Town and Kuils River, the Witwatersrand or other metropoles in our country, will understand. In the Ruhr region and other European areas the high-density areas are much bigger.

Activity 4:

To reflect on the depopulation of rural areas and urbanisation

[LO 3.1, 3.3]

- Is the influx of people into the cities a problem or an opportunity?
- Is the depopulation of the rural areas a problem or an opportunity?

Your group must pretend to be the cabinet of this country. You need to make an urgent decision about the depopulation of the rural areas and the resulting influx into the cities. Are you going to oppose or allow it (and then manage it)?

Use the ideas in the frame below and propose other ideas, then discuss the issue thoroughly. Write a press release of about 150 to 200 words to announce your decision and motivate it.

* The prosperity of a country * Community life is disintegrating – What is left in rural areas? * Young people leave and older people are left behind * Churches * Schools * Houses * Controlled informal housing * Shops and garages * Technology * What does history teach us? * An enemy attack * Municipal income * The building of roads and provision of services * Employment opportunities * What role should the government play? * The “course of life” * Advantages and disadvantages * Tourism * The interest of the country * Emigration

Assessment

Learning Outcomes(LOs)

LO 1

GEOGRAPHICAL ENQUIRYThe learner will be able to use enquiry skills to investigate geographical and environmental concepts and processes.

Assessment standards(ASc)

We know this when the learner:

- identifies sources of information, including simple statistics, to help answer the question about a social or environmental issue or problem;
- selects and records relevant information from sources for specific purposes (including recording and observing in the field);
- reports on enquiries, through discussion, debate, structured writing, graphs, tables, maps and diagrams.

LO 2

GEOGRAPHICAL KNOWLEDGE AND UNDERSTANDINGThe learner will be able to demonstrate an environmental knowledge and understanding.

We know this when the learner:

- explains why more people live in some places than others;
- identifies how access to different kinds of resources influences development in different places;
- describes some ways in which society has changed the environment.

LO 3

~~EXPLORING ISSUE~~ The learner will be able to make informed decisions about social and environmental issues and problems.

~~We know this when the learner:~~

- identifies inequalities within and between societies;
- analyses some of the factors that lead toward social and environmental inequality at different geographical scales and in different places;
- evaluates actions that lead to the sharing of resources and reducing poverty in a particular context.

Memorandum

Activity 1:

- Climate – deserts
- Frozen – very cold
- Swamps en dangerous elements of nature

- Diseases – causes large parts to be uninhabitable and therefore small population
- Gateway to Europe
- Nile – water source
- Yes – most people concentrated around cities

Rapid expansion problems

SOCIAL SCIENCES: Geography

Grade 6

POPULATION DISTRIBUTION AND DENSITY ON A GLOBAL SCALE

Module 6

RAPID EXPANSION PROBLEMS

Rio de Janeiro : one city □ two worlds

Note: One of the 22 federal states of Brazil is called Rio de Janeiro, but in this learning unit we are referring to the city of Rio de Janeiro, which was the capital city of Brazil until 1960. The harbour city of Rio de Janeiro, in Guanabara Bay, is the most important economic and financial centre of the country.

Activity 1:

To do research on Rio de Janeiro and consult a number of sources

[LO 1.2, 1.5]

1. What does the name mean?
2. How did the city get this name?
3. What language is spoken by the majority of residents?
4. Longitude and latitude of the city:

5. The climate of the city:

6. Population of the city:

1. Rapid growth causes serious problems.

- In 1969 the population was 4 million – this grew to 12 million in the following 30 years! When the population grows so rapidly – anywhere in the world – problems occur.
- Brazil is not a rich enough country to provide houses for everyone who moves from the countryside to the city. Because many of these new inhabitants have moved to the city in search of a better life, it is obvious that they do not have money to build conventional houses. Much more than a house is needed: water and electricity must also be supplied. Then there is a need for sewerage and transport. This situation is more serious in many other developing countries and cities, because employment opportunities do not increase as rapidly as the population. This makes large-scale informal housing unavoidable – also in Rio de Janeiro.
- Because of inadequate public transport, the informal settlements have developed close to the city centre and industrial areas, as in other countries.
- About a quarter of Rio de Janeiro's residents

live in informal settlements, called **favelas**. The favelas are characterised by bad planning (often no planning), unhealthy living conditions and crime. The contrast in living conditions between the rich and the poor is more obvious in this city than in other cities with an exceptionally rapid growth rate. In one part of the city wealthy people live in big houses on large pieces of land. 5% of the city's residents live on 25% of the city's land.

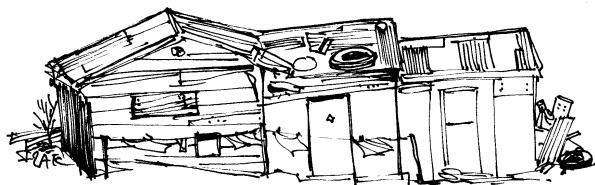
Why has the influx of people into Rio de Janeiro been so rapid?

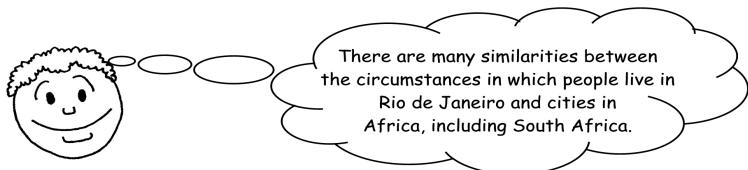
During the last part of the previous century, migration of people took place from isolated rural areas to urban areas – it seemed that people found the facilities and the attractions of the cities irresistible. Many people were convinced that the opportunities that could ensure the future of their children could only be provided in the cities. In Brazil this tendency was further influenced by droughts and other problems in the agricultural sector in the country's interior.

Food factories, manufacturers of textile fabrics, electronic equipment and pharmaceuticals, as well as oil refineries, provide employment opportunities in Rio de Janeiro.

The worldwide phenomenon of a rapidly developing

tourist industry is also evident in Rio de Janeiro – the city's beaches and the natural beauty of the environment attract people from all over the world. Unfortunately the growth in employment opportunities in tourism and industry is not as fast as the population growth. The results are predictable.





Activity 2:

To investigate and think about the circumstances of the people of Rio de Janeiro

[LO 2.3]

- Make a list of the **reasons** for the influx of job seekers into Rio de Janeiro:
- Make a list of the **most significant problems** that new inhabitants of the city experience:
- What would happen if a fire broke out in a **favela**?

Make a list of as many similarities as possible between the problems that people encounter in the

cities of Africa and in Rio de Janeiro

Activity 3:

**To discuss the influence of the climate of
Rio de Janeiro**

[LO 2.1, 2.2]

Determine the latitude of Rio de Janeiro and that will give you a reasonable idea of its climate. Consider the effect of the climate on the living conditions of both the poor and the wealthy inhabitants of the city.

Activity 4:

To discuss the following two problems

[LO 3.2]

A poor family leaves the Brazilian countryside to look for a better life for each member of the family in Rio de Janeiro, where the chances of a better life really are not good.

The circumstances of poor people looking for work in either Rio de Janeiro or any large city in South Africa are very similar.

Activity 5:

To suggest solutions to problems on poverty

[LO 3.3]

Consider the situation in Rio de Janeiro. For the poor the situation is bad. There

must be some sort of solution for the extreme poverty, the poor living conditions and the increasing levels of crime. What do you suggest?

Assessment

Learning Outcomes(LOs)

LO 1

GEOGRAPHICAL ENQUIRY The learner will be able to use enquiry skills to investigate geographical and environmental concepts and processes.

Assessment standards(ASc)

We know this when the learner:

- identifies sources of information, including simple statistics, to help answer the question about a social or environmental issue or problem;
- selects and records relevant information from sources for specific purposes (including recording and observing in the field);
- reports on enquiries, through discussion,

debate, structured writing, graphs, tables, maps and diagrams.

LO 2

GEOGRAPHICAL KNOWLEDGE AND UNDERSTANDING The learner will be able to demonstrate an environmental knowledge and understanding.

We know this when the learner:

- explains why more people live in some places than others;
- identifies how access to different kinds of resources influences development in different places;
- describes some ways in which society has changed the environment.

LO 3

EXPLORING ISSUES The learner will be able to make informed decisions about social and environmental issues and problems.

We know this when the learner:

- identifies inequalities within and between societies;
- analyses some of the factors that lead toward social and environmental inequality at different geographical scales and in different places;
- evaluates actions that lead to the sharing of resources and reducing poverty in a particular context.

Memorandum

Activity 2:

- Facilities, entertainment, droughts, opportunities for children
- No jobs, no housing, crime, unhealthy
- Damage and deaths
- Unemployment; poor housing; poor access to services; crime; unhealthy.

Activity 3:

- 23S – warm (sub-tropical)
- High rainfall – diseases

Weather predictions and synoptic weather charts

SOCIAL SCIENCES: Geography

Grade 6

CLIMATE AND VEGETATION REGIONS OF THE WORLD

Module 7

Weather predictions and synoptic weather charts

The weather is important to all of us, because it affects our lives every day. We can be hot or cold or wet or dry. If we study the weather, we can say every day:

how hot, cold or moderate it is going to be;

how windy it is going to be;

from what direction the wind will blow;

the type of clouds that will occur;

the possibility of dew, frost or fog.

Different instruments are used to measure and notate different elements of the weather.

At weather stations readings are taken every few hours with these and other instruments. These readings are sent to the weather bureau in Bloemfontein. South Africa also has a permanent weather station on Marion Island and information also comes from Gough Island and ships at sea.

One of the biggest problems for South African weather forecasters in the past was that most weather systems come from the west, where there are few ships and weather stations. In the past storms hit the southwestern Cape without any warning. Today, satellite photos are also used to send out images. The photos show where cloud masses across the whole country and the oceans occur. Now the weather forecasters have constant information on the changing weather.

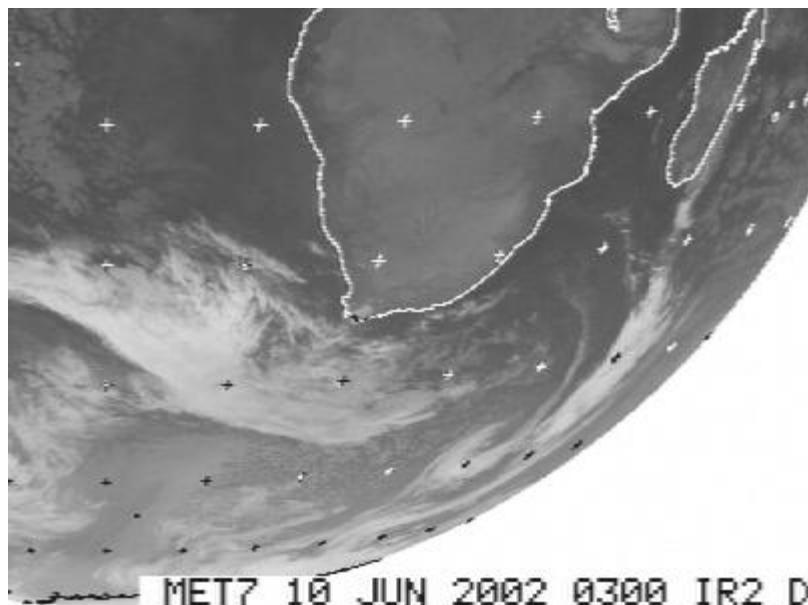


Figure 1: A satellite photo of Southern Africa

All this information is recorded on large charts at the weather bureau. Today computers do a lot of the work. The weather experts study these **SYNOPTIC WEATHER CHARTS** and make their forecasts accordingly.

A synoptic weather chart is not a map of a country because it contains elements that change continuously. A synoptic weather chart actually changes even before it is completed, because it indicates weather patterns that have already occurred. From these you must conclude that the weather conditions of 08:00 at a certain place have moved elsewhere by the evening. Weather forecasters take this fact into consideration and predict what is going to happen in the future. For example, if a weather forecaster knows what the temperature and humidity at a certain place is, as well as the direction in which the weather system is moving, he can predict the weather conditions later at a different place.

These predictions for the next 24 hours are published daily in newspapers and broadcast over the radio and television.

Activity 1:

To compare the weather forecasts and the actual weather conditions

[LO 1.2, 1.5]

The class divides into two groups.

Group 1 collects the synoptic weather charts and accompanying weather forecasts from the newspapers for a week.

Group 2 draws up a brief description of the actual weather for the specific days in your town. If possible (if you have the weather instruments), the temperatures, wind direction and rainfall can be measured.

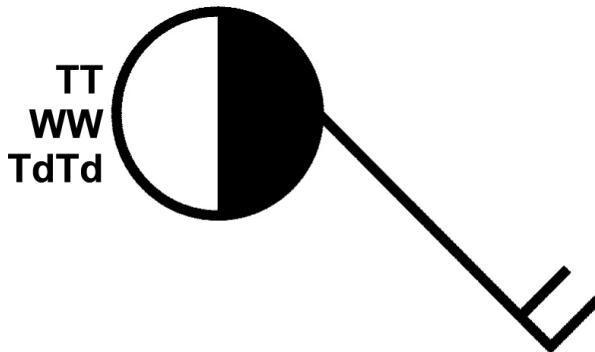
At the end of the week you must compare the weather forecast in the newspaper with the actual weather conditions of your area (town).

1. Symbols on a synoptic weather chart

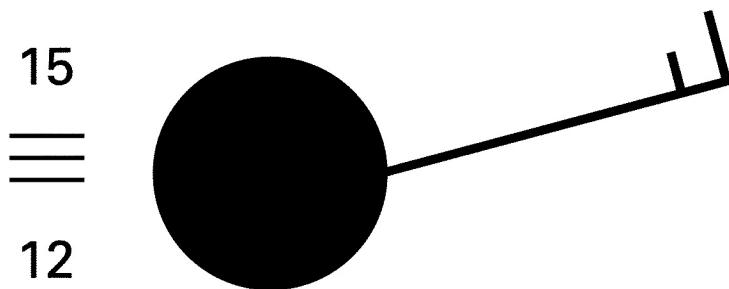
A system of international weather symbols is used to indicate information on weather on a synoptic chart. Each symbol represents a specific element of the weather. If you know these symbols, you can read the weather chart like an expert.

Study a synoptic weather chart with its key.

Above the key is an example of a weather station.



Weather station of the chart key



A hypothetical weather station

Figure 2

Each weather station is indicated by means of a circle (O) on a synoptic weather chart. On the right below the circle the name of the weather station is indicated, e.g. Durban. To the left of the circle are two figures. The top one (TT) indicates the air temperature (15°C). The bottom one (Td) Td indicates the dew point temperature (12°C). The closer the two figures are to each other, the greater is the chance of precipitation.

To the left of the weather station (ww) the possible form of precipitation that is expected is indicated (Ξ). The key explains the various symbols as follows:



Figure 3

These are indicated only if one of the conditions occur; otherwise they are completely omitted.

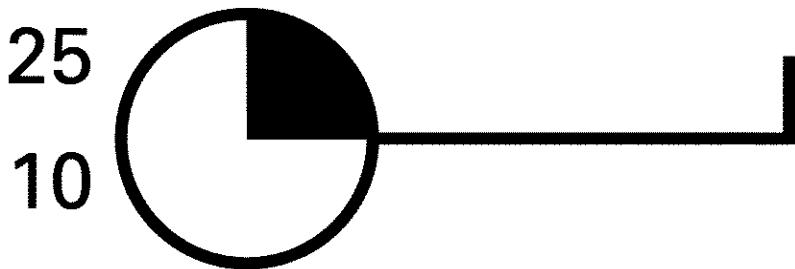


Figure 4

Some weather stations also have a line protruding on the side. This indicates the direction in which the wind is blowing. The arrow moves with the wind. The wind direction in figure 2(a) will therefore be southeast, and the one in figure 2(b) will be northeast. If there is no line, there is no wind. At the end of the line indicating the wind direction there are sometimes “feathers” or short lines. These indicate the wind speed. Each full line indicates a

speed of 10 knots. Each half line indicates 5 knots. A knot is a speed of 1,85 km/h.

In figure 2(a) the wind speed is therefore 20 knots and in figure 2(b) the speed is 15 knots. If the wind speed is less than 5 knots, there will be only a line indicating the direction, but no “feather” or arrow.

A weather station also indicates the amount of cloud cover. Suppose a quarter of the sky is covered in clouds, then a quarter of the circle will be shaded, like in figure 4.

Weather stations forecast cloud cover in eighths.

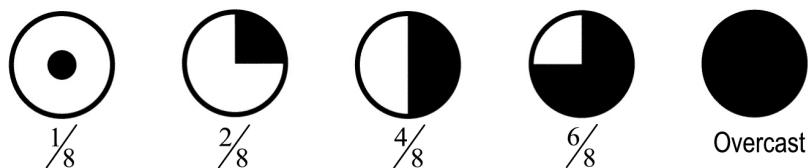
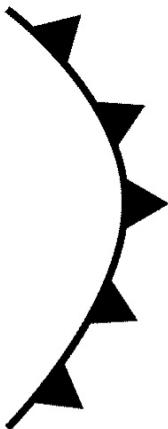


Figure 5

A synoptic weather chart also often contains a curve with black triangles or black semi-circles on it. This is called a front, indicating the separation between two different air masses – cold on the one side and warm on the other. In South Africa we mainly have cold fronts.



cold front



warm front

Figure 6

Cold fronts always move from the west in a more or less easterly direction across South Africa. Where the cold air behind the cold front reaches the warm air in front of it, storms and rain usually occur.

The synoptic weather chart always contains fine dotted lines over the sea. These are called isobars and are lines that connect all places with the same air-pressure. Numbers like 1020 and 1022 are shown at intervals on these isobars. This indicates that the air-pressure along the specific isobar is, for example, 1020 hectoPascal (hPa).

These isobars change and move all the time as an air mass moves from a high-pressure to a low-pressure area. A high-pressure cell is indicated with an H and a low-pressure cell with an L.

Activity 2:

To study the synoptic chart and answer the questions that follow

[LO 1.2]

Study the Bloemfontein and Port Elizabeth weather stations and indicate the weather properties for each in the table below.

Bloemfontein	Weather properties	Port Elizabeth
	Air temperature	
	Dew point	
	temperature	
	Wind direction	
	Wind speed	
	Cloud cover	
	Precipitation	

Compare the weather for the two cities and give a basic weather forecast for each.

What is the wind direction and wind speed at Gough Island in the southwestern corner of the map?

Wind direction at Gough Island
is _____

Wind speed at Gough Island
is _____

How do you know that a cold front is coming?

In what direction do cold fronts move in South Africa?

What type of weather will this cause across the country?

Assessment

Learning Outcomes (LOs)

LO 1

GEOGRAPHICAL ENQUIRY The learner will be able to use enquiry skills to investigate geographical and environmental concepts and processes.

Assessment standards (ASc)

We know this when the learner:

identifies sources of information, including simple statistics, to help answer the question about a social or environmental issue or problem; selects and records relevant information from sources for

specific purposes (including recording and observing in the field);reports on enquiries, through discussion, debate, structured writing, graphs, tables, maps and diagrams.

LO 2

GEOGRAPHICAL KNOWLEDGE AND UNDERSTANDINGThe learner will be able to demonstrate an environmental knowledge and understanding.

We know this when the learner:

explains why more people live in some places than others;identifies how access to different kinds of resources influences development in different places;describes some ways in which society has changed the environment.

LO 3

EXPLORING ISSUESThe learner will be able to make informed decisions about social and environmental issues and problems.

We know this when the learner:

identifies inequalities within and between societies;analyses some of the factors that lead toward social and environmental inequality at different geographical scales and in different places;evaluates actions that lead to the sharing of resources and reducing poverty in a particular context.

Memorandum

Activity 2:

Bloemfontein	Weather properties	Port Elizabeth
21	Air temperature	17
2	Dew point temperature	13
NE	Wind direction	NE
5	Wind speed	10
none	Cloud cover	100% Overcast
none	Precipitation	Good chance

Climate and vegetation regions of the world

SOCIAL SCIENCES: Geography

Grade 6

CLIMATE AND VEGETATION REGIONS OF THE WORLD

Module 8

The climate and vegetation regions of the world

You have learnt that prevailing weather conditions

form the climate of a particular place over a period of time (20 – 35 years). As the weather is unpredictable, we are not able to say for sure that it will rain in Cape Town on New Year's Day, but we do know that Cape Town will normally be drier at this time of the year than in June. Climatic conditions over a long period of time have shown that Cape Town receives most of its rain during the winter.

When we study the features of the types of climate that prevail in places, it is clear that large areas experience the same average conditions and that a type of climatic region is therefore formed. Through the ages people have often been influenced by the climate when they must decide where they want to settle. Large parts of the earth are either too cold, or dry or hot for people to live. The availability of sources also influences peoples' choice of a place to live. That is why approximately six milliard people on earth occupy only 15% of the earth's surface.

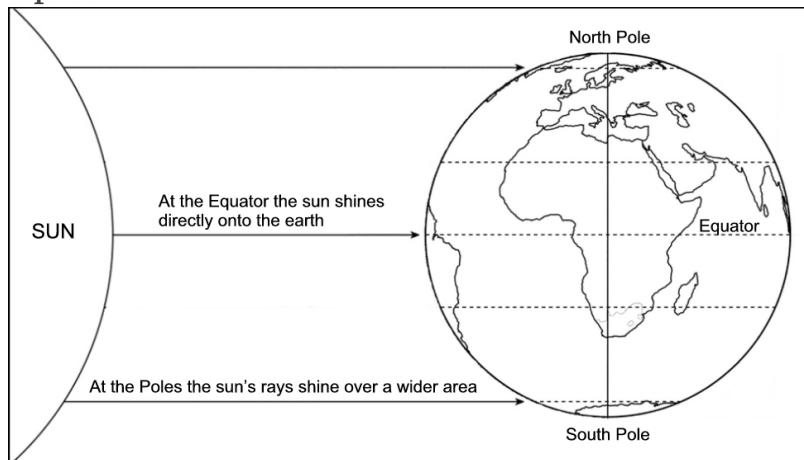
1. Factors that influence climate

- You have learnt in grade 5 that there are many factors that influence the climate of a region. We are now going to take a look at the factors that influence the world's climate.

Latitude of a place

The hottest climates are usually in places closest to

the Equator. The further we move from the Equator, the colder it becomes. At 12:00 the sun is directly overhead on the Equator. The rays of the sun are more concentrated and the temperatures rise higher. Further north and south the rays of the sun fall at an angle and are spread over a larger area by the earth's rounded shape. That is why the sun's rays are less concentrated and as a result the temperatures are cooler.



At the equator the sun's rays are almost directly overhead.

At the poles the sun is lower on the horizon.

At the Equator high temperatures cause high evaporation, which causes a higher downpour.

Altitude above sea level

The earth absorbs the sun's rays, converts them to

heat and radiates them again. The closer we are to the source of radiation, the hotter it is, and the further we are from the source (e.g. on top of a mountain), the colder it becomes. We can experience the principle of radiation by holding our hands close to a fire (or heater) and then move them away gradually. It becomes colder the further we move away from the source.

It is always cold on top of high mountains. The highest mountain peaks on the earth are always covered with snow.

Activity 1:

To find information in an atlas

[LO 1.2, 1.3]

Use your atlas to find out:

- the name and altitude of the highest mountain peak in South Africa;

- the latitude and longitude co-ordinates for Mount Kilimanjaro.

Influence of ocean currents/oceans

The temperatures of the oceans influence the land temperatures. Winds blow the hot or cold air above the hot or cold ocean towards the land and increase or reduce the land temperatures. There are also winds that blow north and southwards from the Polar Regions bringing cold air onto the land.

Water has a larger heat retention capacity than the land has. The water, however, takes longer to heat during the day. Therefore the land reaches higher day temperatures than the water. The sea then has a “cool” influence from the sea to the land. During the night the land cools down much faster than the water, which then causes a “warm” influence from the sea to the land.

The result is that places along the coast or large water masses, experience a moderate temperature. The margin between maximum and minimum is not very big.

Hot water evaporates faster and better than cold water. There is more evaporation above a warm sea current. This results in a higher precipitation in areas that border on warm sea currents.

Relief

In grade 5 we learnt that the escarpment diverts the rain bearing winds and clouds away from the interior. Mountains also have a sunny side and a shady side. The sunny sides have higher average temperatures, and the shady sides have lower average temperatures.

2. Climate and vegetation

- As climate exerts an effect on vegetation, we find that both vegetation and human activities are relatively similar over large areas. Where one region changes into another, we find that a gradual change occurs over a large area. Such an area is referred to as a **transitional/intermediate zone**. Forests do not suddenly change to grasslands, but the occurrence of trees gradually decreases and grasslands increase. The map on page 16 shows the different rainfall and vegetation regions of the world. Remember, there are no specific boundaries. Maps will therefore differ slightly from one another.
- The interaction between plants, animals, soil and climate within a demarcated area develops an ecological system, which we simply call an ecosystem. (Ecosystem = a selection of plants and animals in their own environment.)
- The largest ecosystems that have developed on the earth are known as **biomes**. (Biome = a large area that houses similar plants and

animals and relates to the distribution of climatic regions).

Activity 2:

To study climatic information

[LO 1.2, 1.3, 1.5]

Study the climatic information in the table on page 15 and answer the following questions:

- Determine the longitudinal and latitudinal position of each of these two cities. Which city is closest to the Equator?
- In which countries are the cities situated?
- Select a suitable scale and represent the climatological information graphically. Use a line graph to illustrate the temperature and a bar graph to illustrate the rainfall.
- Which city experiences the greatest temperature fluctuations? How does this

compare with where you live?

- Explain why the temperatures are so high and the temperature variations so little for these two cities.
- During which months do these cities experience the highest temperatures and have the highest rainfall? How does this compare with where you live?

Table 1: Climatic information for Belém and Singapore

	Jan	Feb	Mar	Apr	May	Jun	Jul.	Aug	Sept	Oct	Nov	Dec.
Belém (°C)	25	25	25	25	25	25	25	25	25	25	25	25
Rainfall (mm)	125	125	125	125	125	125	125	125	125	125	125	125
Singapore (°C)	26	26	26	26	26	26	26	26	26	26	26	26
Rainfall (mm)	181	181	181	181	181	181	181	181	181	181	181	181

Assessment:

Learning Outcomes(LOs)

LO 1

GEOGRAPHICAL ENQUIRYThe learner will be able to use enquiry skills to investigate geographical and environmental concepts and processes.

Assessment standards(ASc)

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LO 3

EXPLORING ISSUES The learner will be able to make informed decisions about social and environmental issues and problems.

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- evaluates actions that lead to the sharing of resources and reducing poverty in a particular context.

Memorandum

Activity 1:

- Thabana Ntlenjana – 3 482 m
- S 27.20 E

Activity 2:

- Belém : 1.27 S 48.29 W
- Singapore : 1.17 N 103.51 E
- Belém : Brasil

- Singapore : Malaysia
- Belém
- Intense isolation of the sun throughout the year. Every day is approximately 12 hours long. Angle of incidence of the rays of the sun is vertical or close to it throughout the year.
- Belém : Temperature – November : Rain – February
- Singapore : Temperature – April : Rain – December

The main biomes

SOCIAL SCIENCES: Geography

Grade 6

CLIMATE AND VEGETATION REGIONS OF THE WORLD

Module 9

The main biomes (Vegetation regions)

1. The 5 main biomes

- Vegetation across the world is divided into **five large biomes**:

1. The Forest Biome

- Tropical forests
- Temperate forests
- Deciduous forests
- Needle leaf forests
- Mediterranean forests (Sclerophyll bush)
- Savannah Biome
- Grasslands Biome
- Desert Biome
- Tundra and ice fields Biome

Remember this!

Human beings have altered or destroyed the original environment of many parts of the world.

2. Area division of the different biomes

Main biomes of the world		
Biome	Area(million km ²)	Percentage
Forests	52,3	40,1

Savannah	21,9	16,7
Grasslands	9,9	6,9
Deserts	33,9	25,9
Tundra	13,7	10,5

THE FOREST BIOME

- This biome is dominated by various tree species. In some forests the dense canopy of treetops grows so closely that sunlight cannot penetrate to the ground. In other areas the trees are further apart and sunlight can partially penetrate the tree canopy.
- The most important of these forests is the **tropical rainforest**. These forests are close to the Equator (in the tropics) where it is hot all year round with a very high rainfall. Most of the trees in tropical rainforests are broadleaf, evergreen trees. Palms and tree ferns are also found here. Relatively few people live in tropical rainforests because of the dense vegetation, which makes it difficult to move about.
- In the **deciduous forests**, oak, walnut, willow and poplar trees are found. They shed their leaves during the winter season while the **temperate evergreen** forests are found in regions with rain throughout the year. Pine trees with their pine-cones, called coniferous trees, are found in these forests. Many different

kinds of insects, reptiles, spiders and birds live in these forests. The deciduous and temperate forests are found mostly in the regions that are densely populated ((North America, Europe and Asia). Through the ages people have been dependent on these forests for shelter, food, wood for their houses, weapons and energy.

Activity 1:

To discuss the effect of dense populations on natural forests

[LO 1.1]

Discuss in your groups the effect of densely populated areas on natural forests and how nature can be protected. Write a brief report on the findings of your group.

- Needle leaf forests occur between 50 °N and 70 °S and are adapted to long, cold winters and

short summers.

- The downward sloping leaves of these trees make provision for snow to slide off the leaves.
- The branches are supple; therefore the weight of the snow does not break them easily.
- Very thick bark protects the trunk against the low temperatures.
- The needle-like leaves also allow the snow to slide off easily and their small surfaces reduce the trees' level of exposure to the cold winter winds.
- The needles are covered with a waxy layer that reduces evaporation.

Unfortunately uncontrolled mining methods such as opencast mining, drilling for oil and the establishment of infrastructures that include roads and towns or cities, have damaged this natural biome to a large extent.

In areas with a winter rainfall where the rain develops out of cyclones that come from over the seas, we find **Mediterranean forests**. These regions experience long, dry summers. The vegetation consists of small knotty trees with leathery leaves. Shrubs cover most of the landscape. The plants have adapted in various ways to the summer drought conditions.

Some have tough, leathery or waxy leaves to protect them against the summer heat, and to minimize

evaporation (protea).

Some have fine hairs on their leaves to reflect the sunlight (silver tree).

A thick bark layer around the trunk also reduces evaporation.

Activity 2:

To depict a forest biome by means of collage

[LO 1.5]

Choose any one of the afore-mentioned forest biomes and make a collage to depict it.

THE SAVANNAH BIOME (tropical grasslands)

- This is a transitional region between the wet tropical rainforests and the dry desert and semi-desert regions. It occurs over large areas

of Africa and South America, and is also found in Australia, Central America and South-East Asia.

- The savannah grasslands have an annual rainfall of 750 to 1 500 mm, which falls during the summer months. This means that evaporation is high. The rainfall is not as dependable as it is in the tropical rainforests, and droughts occur regularly. The winters are dry and cloudless, with warm days and cold nights.
- The landscape has a park-like appearance with characteristic trees and tall-growing grasses. More trees grow where there is more water and along the rivers, and grass predominates in the drier parts. During winter the grass dries up and trees shed their leaves, but the landscape turns into a paradise again as soon as the first rains begin to fall in spring. The baobab, mopani, acacia and umbrella-shaped camel thorn trees of Africa are well-known trees of this biome. In Australia, eucalyptus trees are the dominant trees of the biome.
- Fires often rage in savannah regions and prevent trees from gaining the upper hand. The heat of the fires does not affect the grass roots, only the weaker trees. The eradication of the weaker trees ensures that the veld remains clear for grasses to revive again after rain.
- Large herds of grazing animals like zebras,

various antelopes, giraffes, wildebeest, etc. occur here.

Activity 3:

To design a poster of a savannah landscape

[LO 1.5]

The class divides into two groups. Group 1: Collect photographs, pictures and newspaper or magazine clippings that show the landscape and the various animals of the savannah

and use these to make a large poster for the classroom. Group 2: Collect information on the various well-known nature reserves that have been established in the savannah regions and use it to make a poster.

THE GRASSLANDS BIOME (temperate grasslands)

- The temperate grasslands are found in the regions that form a transition between the warm and cold areas of the earth. They are normally found in the interiors of continents and the climate is referred to as a continental climate. This means that it is cool and temperate, with cool to cold winters and warm summers. The precipitation varies between 300 and 500 mm per year.
- Temperate grasslands cover large areas of the earth and have been given different names in different parts of the world:

North America – the Prairies

Asia and Europe – the Steppes

South America – the Pampas

Australia – the Downlands

South Africa – the Veld

- In the RSA, the Transvaal Highveld is typical of the grassland biome.
- The trees are sensitive to frost and are therefore mainly restricted to riverbeds. Exotic trees like eucalyptus and pine trees, which were introduced by people, do well in the region. The main type of vegetation of this biome in South Africa is the local perennial red grass.
- Large parts of the biome have been altered through the intervention of people. Areas have been ploughed to grow mealies and wheat, or are used for grazing. Overgrazing results in the deterioration of the soil and erosion follows. The original animal life has also largely vanished. In South Africa, these parts have been destroyed by mining and the resultant urban development.

DESERT BIOME

- Semi-deserts and deserts, in particular, are those areas of the world where there is an extreme shortage of water because of very low rainfall. The average annual precipitation usually is below 250 mm and there may be years in which no rain is recorded. Daytime temperatures in summer are very high,

although they may be more bearable than the high temperatures of the Tropical rainforests because of the low moisture content of the atmosphere. The nights are cold because of very fast cooling when the sun sets.

- Typical climatic features of semi-desert and desert environments are:

1. Low annual rainfall (less than 250 mm per year)
2. Unreliable precipitation (varies from year to year)
3. Low moisture content of the atmosphere
4. High evaporation
5. Extreme daily fluctuation in temperature

- **The true deserts** are on the five continents:

Namib Southern Africa / Namibia

Sahara North Africa

Thar Pakistan / India

Ar Rub' al Khali Saudi Arabia

Taklimakan China

Alacama South America (Chile / Peru)

Mojave North America

- Vegetation here is either very sparse or non-existent.
- Most of the plants that are found here are **annual plants** that complete their life cycle – germination, growth, flowering, seeding and wilting – in a few months. In this regard, you might picture Namaqualand after rain!
- The vegetation in **semi-desert** regions is suitable for grazing. The plants are xerophytes – plants that are well adapted to the dry conditions. Some have leaves that are covered with fine hairs or with a waxy layer to restrict evaporation. Others like vygies (mesems) are able to store water in the plant tissue. They are called **succulents**.
- Semi-deserts occur over large areas of the world. They form the border areas of true deserts, and together with deserts they cover approximately one-third of the earth's surface. In South Africa the **Karoo** and the **Kalahari** are examples of semi-deserts.

Activity 4:

To do research on desert expansion and

write a report about it

[LO 1.4, 2.3]

People are responsible for the desert regions becoming bigger and bigger. Do research on this topic and write a report of approximately one page. Make suggestions on how the problem can be addressed.

The Tundra Biome and the ICE FIELDS

- The Tundra biome occurs north of 65 °N as a broad zone extending around the Northern Arctic Ocean in Alaska, Canada, Greenland, Iceland and as far as the Bering Sea to the east of Asia. In the Southern Hemisphere it is represented in a small area on Terra del Fuego at the southern tip of South America.
- Climatic conditions in the Tundra biome are characterised by extreme cold. During the long winter months, the temperature falls to far below freezing point. Snowstorms with icy winds occur continuously. Nothing grows and plants remain dormant for many months while the ground is frozen.
- During the summer, the temperature may rise to ± 10 °C, but the summer only lasts for three

to four months. Only the surface layer of the soil actually thaws and water from ice that melts cannot drain away, so that many areas become flooded and marshes are formed.

Rainfall in these regions is low – 250 mm per year – and the rate of evaporation is low, which adds to the impossibility of water draining away.

- Tundra vegetation is therefore adapted to low temperatures and superfluous water. Plants grow quickly. The plants, which come to life in the summer and develop as if overnight, are mosses, lichens, ferns, low shrubs, grass and flowering plants. Animal life is also adapted to the natural conditions. The most common animals of this biome are reindeer, wolves and bears.
- The area is sparsely populated. The Eskimos of Greenland are one of the nomadic groups of people that inhabit the Tundra.
- **The Ice deserts / Polar deserts** are the uninhabitable areas that comprise Antarctica (6th continent), large parts of Greenland, the Northern Arctic Sea and mountain tops with a perennial cover of snow. These ice deserts do not form part of the Tundra biome.
- These areas are too cold for vegetation. Land animals are also absent, however sea animals such as polar bears, whales, seals and sea elephants are plentiful. A variety of birds have their breeding colonies in these areas.

Activity 5:

To do research on Antarctica and describe the climatic conditions of the ice deserts

[LO 1.5]

Describe the climatic conditions that prevail in the ice deserts after having done research on Antarctica.

Assessment

Learning Outcomes(LOs)

LO 1

GEOGRAPHICAL ENQUIRYThe learner will be able to use enquiry skills to investigate geographical and environmental concepts and processes.

Assessment standards(ASc)

We know this when the learner:

- identifies sources of information, including simple statistics, to help answer the question about a social or environmental issue or problem;
- selects and records relevant information from sources for specific purposes (including recording and observing in the field);
- reports on enquiries, through discussion, debate, structured writing, graphs, tables, maps and diagrams.

LO 2

GEOGRAPHICAL KNOWLEDGE AND UNDERSTANDINGThe learner will be able to demonstrate an environmental knowledge and understanding.

We know this when the learner:

- explains why more people live in some places than others;
- identifies how access to different kinds of resources influences development in different places;
- describes some ways in which society has changed the environment.

LO 3

EXPLORING ISSUESThe learner will be able to make

informed decisions about social and environmental issues and problems.

We know this when the learner:

- identifies inequalities within and between societies;
- analyses some of the factors that lead toward social and environmental inequality at different geographical scales and in different places;
- evaluates actions that lead to the sharing of resources and reducing poverty in a particular context.

Rich and poor

SOCIAL SCIENCES

Grade 6

TRADE AND DEVELOPMENT

Module 10

RICH AND POOR

- We live in a world of inequalities – one person is very good at sport and another not at all; one person is talented and another not; one is very

rich and another very poor. And there are many possibilities between the extremes. A person is born with or without talent in sport, or maybe with just a little talent, and there is not much that we can do about it. Your parents (who determine the genes with which you are born) determine your talents and abilities. But wealth is something different. Birth doesn't play a role in how much money or property you will eventually have. It is possible to be born as the child of extremely rich parents but, if you do not learn how to manage your wealth, it is possible to lose everything and die a pauper. In the same way there are many examples of people born in poverty, who, through their own efforts, have changed their circumstances.

Activity 1:

**To provide possible reasons for poverty/
wealth**

[LO 3.1]

Take two 70-year old people. One is wealthy and the other destitute. Have a group discussion and list **four** reasons why these two people find themselves in their present condition. Try to provide the widest **possible variety** of reasons:

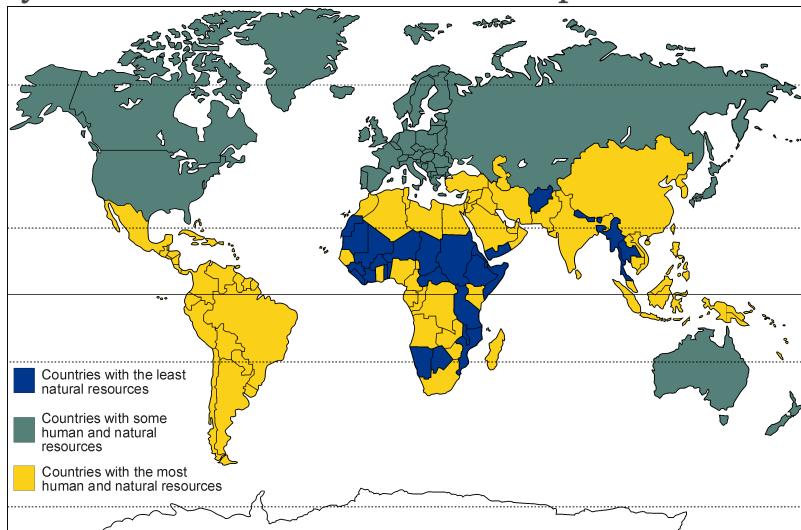
- Possible reasons for the wealth of the wealthy person:
- Possible reasons for the poverty of the destitute person:

Just as there are rich and poor people, there are rich and poor countries. There are obvious reasons for the wealth and the poverty of various countries.

The availability of resources gives one a leading advantage in the race for wealth. If a country has natural resources, this creates the first link in the economic chain of the country. Mining, developing and processing such resources creates job opportunities for the inhabitants of the country who are then able to earn an income, become independent, and provide for their families. When the income is high enough, part of it is paid to the state in the form of taxes. The government uses

these taxes to bring about further development, which creates more job opportunities. This in turn generates more income and finally greater economic growth.

However, when we look at the map that shows the availability of natural resources, it becomes clear why we have a “rich north” and a “poor south”.



The economy of a country is further stimulated if the resources or produced goods are exported. This means that the resource material is sold, either directly or indirectly, to another country. In this way the seller acquires money from another country (foreign exchange) that can be used domestically for further development. Production is increased, which creates more job opportunities and generates higher income.

Activity 2:

To identify rich and poor countries

[LO 1.2]

Study the past few weeks' business news in the newspapers and talk to your parents in order to get examples of rich and poor countries.

- Five rich countries:
- Five poor countries:

Assessment

Learning Outcomes(LOs)

LO 1

GEOGRAPHICAL ENQUIRYThe learner will be able to use enquiry skills to investigate geographical and environmental concepts and processes.

Assessment standards(ASc)

We know this when the learner:

- identifies sources of information, including simple statistics, to help answer the question about a social or environmental issue or problem;
- selects and records relevant information from sources for specific purposes (including recording and observing in the field);

1.4 uses information to propose solutions to problems;1.5 reports on enquiries, through discussion, debate, structured writing, graphs, tables, maps and diagrams.

LO 3

EXPLORING ISSUEThe learner will be able to make informed decisions about social and environmental issues and problems.

We know this when the learner:

- identifies inequalities within and between societies;
- analyses some of the factors that lead toward social and environmental

- inequality at different geographical scales and in different places;
- evaluates actions that lead to the sharing of resources and reducing poverty in a particular context.

Reasons for wealth/poverty

SOCIAL SCIENCES

Grade 6

TRADE AND DEVELOPMENT

Module 11

REASONS FOR WEALTH/POVERTY

A. Reasons for Wealth / Poverty

1. The Influence of the Spice Trade

- When the spices of the Far East were discovered, the Arabs were the first merchants to transport and sell these sought-after products. They traded with merchants from the wealthy Roman Empire at first, and later sold their precious goods to all who could afford them. It was regarded as a symbol of wealth to have spices on one's table. Venice, a very prosperous Italian city with a powerful naval base, saw a gap in the market and through their participation in the Crusades forced all spice merchants to move through the Venetian ports. Later Venice controlled every aspect of the spice trade, fixed the prices and became very rich. Spices became so expensive that it was almost impossible to buy them, with the result that the other European countries decided to make an effort to find another sea route to the East, so that they could buy their own spices directly from the original merchants.
- The Portuguese, with their excellent naval skills, took the lead and as early as 1497 they sailed around the southernmost tip of Africa on their way to the East. Wherever they found spices they simply seized them, and instantly killed any of the local inhabitants who offered any resistance.

2. Colonisation

- Other European countries also set out on voyages of discovery with the main aim of discovering and occupying new territory. Countries such as Britain, the Netherlands and Belgium simply claimed territory for themselves without taking the indigenous population into account. The occupiers then proclaimed these occupied territories as their own “colonies”.
- In this way the Dutch established themselves here in South Africa with the main objective of providing fresh fruit and vegetables for the passing ships. The greatest part of Africa, as well as the Americas, India, New Zealand and Australia were gradually taken over and colonised in this way.

The settlers from Europe simply appropriated (took for their own use) all the raw materials that were to be found in the colonies without compensating the indigenous people. In this way gold, diamonds, silver, timber and spices were taken to European countries from the colonies. Mozambique, a former Portuguese colony, is a very good example of what happened in that era. For 500 years, from 1505 to 1975 when Mozambique was a Portuguese colony, most of its resources were exploited by other countries.

- When the colonies became independent during the middle of the twentieth century, the new,

independent states were not properly developed at all. In general, the people were not really highly literate and skills were not properly developed. The transport infrastructure was poor or non-existent. The colonists left behind them depilated mines, instead of developed industries. No attention had been given to the training of local managers for companies, banks, schools, mines or even administration. The companies that had been founded in the colonies had enriched the European countries, but had not brought any financial gains for the indigenous people. The colonists (foreigners who had occupied the country) had seen to it that there were good schools for their own children, but they had given no attention to the education and training of the local populace.

- Today most of the former colonies are still extremely badly off. Their economies are very poorly developed. They have been forced to build up their impoverished countries, which had been robbed of their raw materials, without the skills and the money of the colonists.

3. The European Renaissance (re-awakening)

- Many European countries became wealthy as a result of the spice trade, and paid academics and students a great deal of money to do

research. The research results were applied to establish products of a better quality, better financial services and a higher standard of education. These countries developed rapidly, but they did not pass their knowledge and expertise to the colonies.

- Poor people were used to manufacture and produce goods, but they were paid very low wages. These products were sold back to the local people of the colonies from where the raw materials had initially been taken.
- The income of the countries from which the raw materials had been taken – the colonies – was not increased, while the colonial powers, the European countries to which the colonies belonged, grew richer. Europe became wealthier as time went by, while the indigenous people of the colonies became more and more impoverished. The living conditions in the European cities improved greatly and both medical and educational services were of a very high standard.
- By now you will have realised that the withdrawal of the colonists caused a tremendous need for development.

Activity 1:

To discuss the possible consequences of high

medical and educational standards

[LO 3.2]

- In your groups, discuss the advantages of a high standard of medical and educational services for a community. Think widely and consider the long-term effects of such quality services. Provide feedback to the class and compile a list of advantages.

4. The Industrial Revolution

- As Europe became increasingly powerful economically and financially, more and more machines were developed to do the work in factories faster and on a greater scale. The machines brought about a total revolution in the field of industry. Now, less human labour was needed, and the machines were able to manufacture the goods much more cheaply than before. The machines provided cheaper labour than the workers in the colonies and other countries had previously been able to do.
- England and other European countries took steel out of the African colonies, used it to mass-produce products and then exported these products to the colonies and other countries. In this way the inhabitants of the colonies bought products that had been manufactured from

their own raw materials, and for which they had received no compensation.

5. Climate

- Another factor that can contribute to poverty is the influence that climatic conditions have on people.

Activity 2:

To investigate access to rain water as a resource

[LO 2.2]

Consult physical maps of Africa on which climate zones and average annual rainfall figures are indicated. Try to determine what percentage of Africa is made up of desert and semi-desert areas. Then decide if an aspect of Africa's problems may be ascribed to low or unreliable rainfall.

Percentage of Africa that is desert or semi-desert:

_____ %

_____ %

6. Population growth as part of Africa's problem

The population of Africa, south of the Sahara, is growing too fast. According to one calculation, there will be a ten-fold increase in the continent's population between the years 1950 and 2050!

It is important to keep in mind that a ten-fold increase in population can produce a ten-fold increase in the continent's problems!

Remember that it is not only the population that is growing – there is an equal increase in the demand for food, educational opportunities, housing, energy and job opportunities. Many social, political, economic and ecological problems grow at the same rate.

Let us take as an example a country where the population grows faster than its capacity to produce food for its inhabitants. If the country has a strong economy and there is money to buy food, everything is fine, but what happens if this is not so?

Help must come from somewhere to buy food. For many years, help came from the “wealthy countries to the North”. But now we have to consider whether the “rich” countries will always come to the help of the “poor” countries?

In the USA, Canada and Europe, farmers produce more food than can be consumed by the inhabitants of those countries. The surplus food can be purchased and distributed in countries with chronic shortages or where natural disasters occur and cause great pain and suffering. Unfortunately, production costs are increasing to such an extent that it is becoming increasingly expensive to buy and distribute wheat, corn and rice to areas of need.

B. The Result:

... THE “RICH” NORTH AND THE “POOR” SOUTH

The “rich North” Developed countries Controlled population growth High standard of living	The “poor South” Developing countries High population growth Low standards of living
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Activity 3:

To identify the reasons for the phenomenon of rich and poor

[LO 1.2]

- The following report appeared in *Die Burger*. Read it carefully and identify one of the reasons why many African countries were unable to rid themselves of backlogs after independence. Write your findings in the space provided below the report.

Leaders Steal Billions From African Countries, Says Obasanjo

LAGOS – According to president Olusegun Obasanjo of Nigeria, African leaders have stolen almost \$140 billion (about R1 400 billion) from the continent in the past three or four decades.

On Thursday, in Addis Abeba, the capital city of Ethiopia, Obasanjo said that theft was the main cause of poverty in Africa.

He was addressing delegates from African communities at a conference of the Organisation of African Unity.

Obasanjo also called on world leaders to support Africa in its attempts to recover a part of this stolen money that is hoarded in bank accounts in foreign countries.

He said that African leaders were the main culprits but Western countries that held this stolen money,

must also accept part of the responsibility.

He said, “We are attempting to organise an international convention, by which we will be able to recover the moneys stolen by corrupt African leaders and invested in foreign countries.”

“It is not enough to merely blame the developing countries,” Obasanjo said.

“Western countries must support the attempts made to recover the money stolen from our treasuries in practice,” he added.

For example, an amount of about \$4 billion (about R40 billion) disappeared during the administration of General Sani Abacha of Nigeria. Recently an undertaking to recover part of this money was concluded in the Swiss city of Geneva.

Nigeria simultaneously agreed to stop legal action against the Abacha family and to release more than \$100 million (about R1 billion) of what the family will be allowed to keep.

Source: *Die Burger*, 15 June 2002

Today, the world can be divided into two main groups, based on their material means.

Developed countries: The USA, Canada, Japan, Australia, New Zealand and European countries

such as Britain, Germany, France, the Netherlands and Belgium. These countries are situated mainly in the northern hemisphere and they are commonly known as the “rich North”.

Developing countries: Large parts of Asia, Africa and Latin America (American countries where Spanish, Portuguese and French are spoken). These countries are situated mainly in the southern hemisphere and are collectively known as the “poor South”.

In the rich countries the standard of living is high. Most people earn a relatively high income, eat nourishing food and have access to good health services and education. On the contrary, the standard of living in the poor countries is usually very low, and people earn a meagre income. Many of the inhabitants of these countries are undernourished and do not have basic commodities such as health services and proper educational facilities. Approximately 80% of the total world population live in the poor South, while the other 20% enjoy the comfort, wealth and space of the wealthy countries.

Activity 4:

To express an opinion on the prosperity of the average South African

[LO 3.1]

- Group discussion Would you say that South Africa could be described as a prosperous (wealthy) country? Substantiate the opinion of the group as you go along.

Assessment

Learning Outcomes(LOs)

LO 1

GEOGRAPHICAL ENQUIRYThe learner will be able to use enquiry skills to investigate geographical and environmental concepts and processes.

Assessment standards(ASc)

We know this when the learner:

- identifies sources of information, including simple statistics, to help answer the question about a social or environmental issue or problem;
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field);

1.4 uses information to propose solutions to problems; 1.5 reports on enquiries, through discussion, debate, structured writing, graphs, tables, maps and diagrams.

LO 2

GEOGRAPHICAL KNOWLEDGE AND

UNDERSTANDING The learner will be able to demonstrate an environmental knowledge and understanding.

We know this when the learner:

2.2 identifies how access to different kinds of resources influences development in different places;

LO 3

EXPLORING ISSUES The learner will be able to make informed decisions about social and environmental issues and problems.

We know this when the learner:

- identifies inequalities within and between societies;
- analyses some of the factors that lead toward social and environmental inequality at different geographical scales and in different places;
- evaluates actions that lead to the sharing of resources and reducing poverty in a particular context.

Memorandum

Activity 1:

Better education – better health – higher life expectancy – higher quality of life – higher production

Characteristics of developing countries

SOCIAL SCIENCES

Grade 6

TRADE AND DEVELOPMENT

Module 12

CHARACTERISTICS OF DEVELOPING COUNTRIES

1. Characteristics of Developing Countries

1. Low life expectancy – is measured against the average age that the individual is expected to reach.

Complete and study the following table:

N/S	Country	Life expectancy in years
.....N.....	Canada	78,8
.....	Britain	77,8
.....	USA	77
.....	Brazil	67,7
....S.....	South Africa	52,1
.....	Angola	45,2
.....	Zimbabwe	42,9
.....	Mozambique	39

Activity 1:

To draw conclusions from statistics

[LO 1.2, 1.5, 2.2]

Have a group discussion and write a short paragraph on your findings.

developed countries allocate a great deal of money to the health services budget, therefore fewer babies

die at birth and in early infancy. more people have a longer life expectansy in these countries, because they have access to good preventative medical care.

2. Low standard of education

Education and training determine the standard according to which the population of a country functions and produces goods and services. One must remember that there are approximately 80 million children in the poor South who do not go to school at all, therefore one can understand why poor countries are faced with unemployment. Without the necessary training people cannot be prepared for a vocation. This means that such people have no chance of improving their own conditions.

3. Poor health care

The percentage of a country's budget that is allocated to health services largely determines the standard of health care in that country. If we consider the average percentage of 4% in developing countries as opposed to the 96% in developed countries as shown on the graph on page 12, it is easy to understand why the hospitals in many poor countries are in such a shocking condition. There are simply not enough doctors and facilities for the number of inhabitants of the countries.

Interesting statistics

Quota of patients per medical doctor	
Developed European country (N)	1:250
Developing African country (S)	1:20 000

4.. Unemployment

Have you seen this somewhere?

Over-population and low literacy are some of the main causes of unemployment. Everybody would like to have a job in order to make money to earn a living. People who are unemployed cannot be self-supporting and therefore they are unable to make any contribution to the economy of the country.

5. Poor nutrition and limited access to safe water

Only 43% of the world's food production comes from countries that accommodate 80% of the global population. This, together with the low life expectancy and inadequate education and training, as well as insufficient industries, provides a recipe

for malnutrition (a condition that arises when people do not eat enough nourishing food). Approximately 30% of the children in the poor South do not have enough food to eat every day.

In developing countries many people are dependent on a stream or a river for their daily supply of fresh water. The water from these sources is not always safe and clean and if people use the water just as it is, it could lead to outbreaks of diseases such as cholera, which cause many deaths every year.

Water facts

- More than 1 billion people did not have access to safe water in the year 2000.
- In Mozambique approximately 16% of the inhabitants of the country have safe, clean drinking water.
- In South Africa an average of 638 ℓ water is used per person per day. Only 2,5% of the total water supply of the world is fresh.

Activity 2:

To do research and record findings

[LO 1.5]

What is safe water? Find out!

- Is your drinking water safe?
- How can water be made safe?
- Is water from a river always safe?
- Do all the people in your area have access to safe water?
- What can be done to ensure that everyone has access to safe drinking water?

6. Overpopulation

The population grows much faster in developing countries than in developed countries.

The population in Africa south of the Sahara is growing much too fast! According to one calculation there will be a tenfold growth in the population of Africa in the century between 1950 and 2050!

It is very important to keep in mind that on a continent such as Africa a tenfold growth in population will mean that there could possibly be a tenfold increase in the problems of the continent as

well!

Remember that it is not the population alone that will increase – at the same time there is a great increase in the need for food, educational opportunities, housing, energy and job opportunities. Various social, political, economic and ecological problems also increase at the same rate.

7. Poverty

Poverty means being hungry. Poverty means having no shelter. Poverty means being ill and having no doctor or proper medical care. Poverty means having no access to a school, and not being able to read. Poverty means being unemployed; living in fear of the future – one day at a time.

In most of the developing countries there is an enormous disparity (gap) between the rich and the poor.

Activity 3:

To deal with the problem of poverty in

my environment

[LO 3.1, 3.3]

Is poverty obvious in your area? How does one notice it? Have group discussions on possible ways in which to tackle the problem of poverty in your immediate environment. Try to generate suggestions that will provide relief in the long term; recommend plans that will bring about meaningful change and do more than merely feed the children for one day.

B. How can developed countries help the developing countries?

- “Health” is described by the World Health Organisation as the level of physical, spiritual and social well-being enjoyed by people. In the poor South the standard of food and sanitation is very low, and there is very limited access to fresh water. The general health of the inhabitants is much poorer than that of people in the developed countries. People who do not have enough good food and fresh water are much more susceptible to disease. The state has to give a great deal of support in preventing and treating disease. When someone is ill, he or she is unable to work, and this is very

detrimental to the economy of the country.

- The wealthy northern countries have already created various organisations that are involved in giving aid to the poor countries. Food and medical supplies are granted on a continual basis. However, because of the inadequate infrastructure of the poor countries, the distribution of such supplies often causes even more crises. Very frequently huge amounts of food and medical supplies never reach the people for whom they are intended. In the USA, Canada and Europe the farmers produce much more food than what is needed by the people of these countries. The surplus food can be bought and distributed in countries that have a chronic lack of food, or where natural disasters have occurred and there is great suffering and misery. Unfortunately, production costs have increased so greatly that it has become extremely expensive to buy wheat, maize and rice for distribution to people in distress.
- A very important part of the income of many of the developing countries is derived from exporting their natural resources and primary products. Unfortunately the developed countries buy these products and resources at extremely low prices, and resell the processed products to the developing countries at very high prices. In this way the gap between the rich and the poor continues to grow all the time.

- It is essential that the trade in the opposite direction be stimulated. Developed countries simply have to make their markets more accessible to the developing countries. Poor countries should be encouraged to manufacture their own goods and to export these products to the rich countries.

Assessment

Learning Outcomes(LOs)

LO 1

GEOGRAPHICAL ENQUIRYThe learner will be able to use enquiry skills to investigate geographical and environmental concepts and processes.

Assessment standards(ASc)

We know this when the learner:

- identifies sources of information, including simple statistics, to help answer the question about a social or environmental issue or problem;
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field);

1.4 uses information to propose solutions to problems; 1.5 reports on enquiries, through discussion, debate, structured writing, graphs, tables, maps and diagrams.

LO 2

GEOGRAPHICAL KNOWLEDGE AND

UNDERSTANDING The learner will be able to demonstrate an environmental knowledge and understanding.

We know this when the learner:

2.2 identifies how access to different kinds of resources influences development in different places;

LO 3

EXPLORING ISSUES The learner will be able to make informed decisions about social and environmental issues and problems.

We know this when the learner:

- identifies inequalities within and between societies;
- analyses some of the factors that lead toward social and environmental inequality at different geographical scales and in different places;
- evaluates actions that lead to the sharing of resources and reducing poverty in a particular context.

Memorandum

Activity 1:

Shortage of natural resources

S – developing (colonisation)

N – developed – high level of service

HIV/Aids as a developmental problem

SOCIAL SCIENCES

Grade 6

TRADE AND DEVELOPMENT

Module 13

HIV/Aids as a Developmental Problem

HIV/Aids is a terrifying reality. The following newspaper report (translated from *Die Burger* of 1 December 2004) makes this very clear.

Aids still on the increase in SA

Figures “disguise” the true extent of HIV/Aids in the

country

Antoinette Pienaar

PRETORIA. – The most destructive phase of the Southern African Aids pandemic has probably already reached us, but it is being “disguised” by statistics.

The latest Aids report issued by the United Nations warns that the alleged stabilisation of the incidence of HIV/Aids in some of the countries in this region does not necessarily mean that the pandemic has lost its impetus.

This includes South Africa where earlier this year the Department of Health described the slightly smaller rise in HIV/Aids cases among pregnant women (from 25% in 2001 to 26,5% in 2002 and 27,9% in 2003) as the first signs that the situation was stabilising.

According to the report, the worst phase of the pandemic could be hidden when Aids claims just as many lives as the number of people who contract the virus.

South Africa currently has the greatest number of people with HIV/Aids in the world – between 4,5 million and 6,2 million. These numbers are probably still climbing. In one of the rural areas of KwaZulu-Natal Aids-related deaths rose so steeply in the

1990s that they accounted for 48% of all deaths among adults by the year 2000.

“The deaths in this region are most certainly going to increase in the next few years because the incidence of HIV/Aids rose sharply there in the latter part of the 1990s. Aids deaths reflect the number of new cases of HIV/Aids of ten years before.” According to the report between 35,9 million and 44,3 million people world-wide are suffering from HIV/Aids.

Approximately 4,9 million people are expected to become HIV positive this year and 3,1 million are expected to die of Aids-related illnesses. Southern Africa is undoubtedly the hardest-hit region in the world, with approximately 25,4 million HIV positive people this year compared to 24,4 million in 2002. Almost two-thirds of all people with HIV/Aids live in this region. Although the world spent more than \$6,1 billion (approximately R36,5 billion) this year in fighting the pandemic as opposed to \$2,1 billion in 2001, less than 1% of all people between 15 and 49 years of age have access to HIV testing and counselling in the 73 countries that suffer most.

Between 5 million and 6 million people need immediate treatment with anti-retroviral medication. Less than 10% who should be getting such treatment have access to it.

Activity 1:

To make deductions from sources

[LO 1.1, 1.2, 3.1, 3.2. 3.3]

- Use the newspaper report on page 25 as a source and complete the following table. You may also make use of other sources.

THE CONSEQUENCES OF HIV/Aids	
South Africa's position on the Aids ranking list	
Number of people with Aids in South Africa	

SA province with the highest Aids figures

Percentage of growth in Aids cases in SA from 2002 to 2004

Percentage of growth in world funds for Aids from 2002 to 2004

Percentage of Aids cases that do not have access to essential antiretroviral medication

Help for Aids

Aids sufferer's radio is "vital"

Maali-Malixolegwatu

That is what a visitor will come across somewhere in among the hundreds of squatters' shacks in New Rest, Guguletu.

It's not so easy to gain access to this shack. The secret is to go to a bedroom window around the back of the shack and to explain the reason for your visit.

Ms Noberia Koko (37), who lives here, is alone, blind – and bed-ridden.

After chatting for a while Koko hears that the purpose of the visit is to have an interview. She asks her guests to fetch her younger sister before they are allowed into the house.

After about thirty minutes Ms Ruth Koko arrives and goes to the open window as usual. The keys are handed to her.

Once the visitors are in the house, the Xhosa radio station, Umhlobo Wenene (“Your true friend”), is immediately turned down somewhat.

On being asked why the radio was playing so loudly, Koko replies that it is “vital” to her.

“I am on antiretroviral medication and I have to know what time it is.”

“When you are on these tablets you have to take them regularly – at exactly the prescribed time.”

In the tiny room with its three beds, she talks sadly about her only daughter, Nomonde (22), who used to look after her. “She left recently to work in George,” she says quietly.

“She left home with a priest on 10 November, saying that she had found work.

“I don’t believe that it’s true. I suspect she is involved with him.”

She explains that she has to “feel” the size and texture of her tablets to determine which to take at certain times daily.

Koko relates how she became ill in 1999 when her battle against tuberculosis started.

“A year later, after a blood test, the doctor told me that I was HIV positive.”

According to Koko this was the start of a “long, uphill battle” involving sangomas, relatives and medical practitioners.

“People said my condition had been caused by some ‘evil’ that had been inflicted upon me, while the doctors told me that it had something to do with my HIV status,” says Koko.

After what the antiretroviral medication has “done to her” she feels that it is the best option. She firmly believes that people should not hesitate to use these drugs.

Die Burger, 1 December 2004

In this report from *Die Burger* of 1 December 2004 we read about medication that is available to HIV patients. We also read in the report on page 26 that less than 10% of all people who are dependent on such drugs, have access to them.

Activity 2:

To do research about the successful effects of antiretroviral drugs

[LO 1.4, 1.5, 3.1, 3.2]

Criticise or defend the following statements:

1. Antiretroviral drugs only support the health of people who are infected with HIV and they do not cure such people.
2. All people in South Africa have equal access to antiretroviral drugs.

(If you disagree with the latter statement, discuss possible steps that could lead to a more equitable distribution of these drugs.)

Where are antiretroviral drugs available, and at what price?

Which special products do you know of that are

specifically aimed at alleviating the suffering of people who have been infected with HIV?

Assessment

Learning Outcomes(LOs)

LO 1

GEOGRAPHICAL ENQUIRYThe learner will be able to use enquiry skills to investigate geographical and environmental concepts and processes.

Assessment standards(ASc)

We know this when the learner:

- identifies sources of information, including simple statistics, to help answer the question about a social or environmental issue or problem;
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LO 2

GEOGRAPHICAL KNOWLEDGE AND

UNDERSTANDINGThe learner will be able to demonstrate an environmental knowledge and understanding.

We know this when the learner:

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LO 3

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We know this when the learner:

- identifies inequalities within and between societies;
- analyses some of the factors that lead toward social and environmental inequality at different geographical scales and in different places;
- evaluates actions that lead to the sharing of resources and reducing poverty in a particular context.